Effectiveness of shock wave therapy: implementation of a soft wide focus applicator in patients with erectile dysfunction

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INTRODUCTION

Low-intensity extracorporeal shock wave therapy (L-IEST) is of great clinical interest for the treatment of erectile dysfunction (ED), chronic pelvic pain (CPP) and Peyronie’s disease. Extensive research in animal and human studies showed that the beneficial effect of L-IEST is due to its angiogenic properties. It is thought to stimulate neovascularization by inducing the expression of regeneration- and growth-related factors, like for example eNOS, VEGF and PCNA, although the precise underlying mechanisms are not entirely clear yet. Thence L-IEST can increase penile blood flow and endothelial function and represents a new, sustainable therapeutic strategy to restore erectile function, independent of, or supporting the conventional palliative medication.[1][2][3]

OBJECTIVE

Report progress on L-IEST in the treatment of vascular ED using a SWFA (soft wide focused applicator) handpiece for a cohort of patients in a clinical center in Bogota, Colombia.

METHODS

Clinical records of patients treated in a Boston Medical Group centre in Bogota were reviewed during the first half of 2016, with diagnosis of vascular ED. Patients underwent a protocol of L-IEST once a week for 5 weeks, energy flux density 0.15mJ and 3000 pulses per session, with the MTS urogold100® and applicator OP155. Outcome measurements: Erection Hardness Score (EHS), International Index of Erectile Function, 5-item version (IIEF-5).

RESULTS

20 patients with a mean age of 53.1 ±12.1 years were included. At admission, 79% of patients had mild / moderate (n=14), 20% (n=4) moderate and 10% (n=2) severe ED according to the IIEF-5 scale. After five sessions 25% (n=5), and after one month follow-up even 45% (n=9) of patients showed a clinical important difference (defined as an increase of ≥4 points) in the IIEF score with an average increase of 5 points (18 ±4.4).

Assessing the EHS 55.5% of patients at baseline (mean EHS: 3 ±0.6) had an erection insufficient to penetrate; this proportionally decreased significantly to 28% after therapy (mean EHS: 4 ±0.7), a beneficial effect that was still persisting after one month follow-up (mean EHS: 4 ±0.7).

Conclusions

The preliminary results of L-IEST in the treatment of ED with the MTS urogold100® and applicator OP155 are promising and indicate a clinically significant improvement in both, the IIEF and EHS by this technology. Studies with a larger group of patients, a longer follow-up and a comparative shock wave protocol setup are necessary to further assess the statistical, clinical significance and efficacy of this improvement in erectile function upon L-IEST.

REFERENCES